

University of Maryland

Project Name ...

Testing the Effectiveness of the Exercise Plus Program

Principal Investigator ...

*Barbara Resnick, Ph.D., Assistant Professor
University of Maryland
655 West Lombard Street
375A, School of Nursing
Baltimore, MD 21201
tel. 410-706-5178 ; fax. 410-706-0344*

Background / Significance of Problem ...

Hip fracture is a major public health problem with striking consequences for the older adult, his or her family, and the health care system. By the year 2040, more than 650,000 hip fractures will occur annually in older adults over the age of 65. Recovery following a hip fracture has been shown to be greatly facilitated by participation in a rehabilitation program, and continued participation in a regular exercise program can improve functional recovery, muscle strength, and prevent future fractures. Despite the benefits of exercise, it is difficult to get older adults to initiate exercise activity, and helping them adhere to an exercise regime is even more challenging. It is essential to find ways to increase exercise activity in older adults. Self-efficacy, a belief in the individual's capabilities to perform a course of action to attain a desired outcome, and outcome expectancy, the belief that carrying out behavior will lead to a desired outcome, are hypothesized to be critical factors in adhering to a regular exercise program. The primary aims of this study are to implement a home delivered self-efficacy based intervention to strengthen efficacy expectations (self-efficacy and outcome expectations) related to exercise, decrease perceived barriers to exercise, and improve exercise behavior and overall activity of older adults who have sustained a hip fracture. The secondary aims focus on the anticipated benefits that are expected to occur when older adults exercise regularly.

Research Question ...

The primary aims of this study are to: 1) Test the effectiveness of the Exercise Trainer component of the intervention (i.e. regular home visits from an exercise trainer) on exercise behavior, activity, and efficacy expectations (self-efficacy and outcome expectancy) related to exercise at 2, 6, and 12 months following a hip fracture (hypothesis 1); 2) Test the effectiveness of the Plus component of the intervention (i.e. motivational intervention provided at home) on exercise behavior, activity, and efficacy expectations related to exercise at 2, 6, and 12 months following a hip fracture (hypothesis 2); 3) Determine if the Exercise Trainer component is enhanced by the Plus component (i.e., the Exercise Plus Program) with regard to exercise behavior, activity, and efficacy expectations related to exercise at 2, 6, and 12 months following a hip fracture (hypothesis 3).

Findings To-Date ...

- At this point in time a total of 151 participants have been enrolled in the study. The majority of these individuals are Caucasian and the average age is 82. Preliminary findings show some positive trends in terms of the effectiveness of the Exercise Plus Program on improving adherence to exercise. Participants exposed to any of the treatment groups reported more time exercising and engaging in physical activity, less fear of falling at 6 months, better function at 2 months for those in the exercise only and exercise plus groups, and better function at 6 months for those in the Exercise only and Plus only groups. Participants in treatment groups were more likely to report that they intended to initiate an exercise program in either the next 30 days or the next 6 months.

Implications ...

[for multibehavioral and multi-theoretical approaches to behavior change]

- These findings provide some support for both theories used in the development of the interventions. In addition, although results are preliminary there is some support to suggest for ongoing monitoring of outcomes to establish if these benefits will last over time. In addition, it is possible that inoculation treatments may be needed to not only help those who are exercising to continue to do so, but to help those who report an intention to exercise to actually initiate exercise.

Future Research Directions ...

Future research will focus on monitoring the impact of the Exercise Plus Program over time. In addition, qualitative work throughout the course of the study has helped to identify areas in which the intervention could be improved to better facilitate behavior change. Moreover, specific issues related to behavior change among older adults (i.e., cognitive issues and physical problems such as sensory changes) were noted and the interventions may need to be adjusted to better meet the needs of individuals with these specific impairments.